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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/597,547

11/03/2006

Seiji Kikuchi

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EXAMINER

CHEN, JIANZI

ART UNIT

PAPER NUMBER

2821

NOTIFICATION DATE

DELIVERY MODE

07/02/2009

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

gbpatent@gbpatent.com
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Office Action Summary	Application No. 10/597,547	Applicant(s) KIKUCHI, SEIJI	
	Examiner Jianzi Chen	Art Unit 2821	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 November 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) 1,4,7 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2-3,5-6,8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 July 2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>11/03/2006</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Drawings

1. Figures 3 and 9 are objected to because fig.3, the label of "BS" should be changed to - S_B - as described in page 17, line 3 from bottom; fig.3, the label "TS₁" should be changed to - TS_{11} -; "TS₃" should be changed to - TS_{13} - as described in page 35, line 1 from bottom. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

2. The disclosure is objected to because of the following informalities: page 7, line 5, the phrase "between he electrodes" should be changed to - -between the electrodes- -; page 20, line 6, "I_b" should be changed to - -I_B- -. Appropriate correction is required.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 2-3, 5-6 and 8 are rejected under 35 U.S.C. 102(b) as being anticipated by Kikuchi Seiji, JP Publication No. 2001-244088 from IDS hereinafter refer to as Kikuchi Seiji.

As to claim 2, Kikuchi Seiji discloses a high pressure discharge lamp lighting device of supplying an AC lamp current (1, fig.1) to light up a high pressure discharge lamp, characterized by providing a lamp current forming device (comprising 5, 6 and 7, fig.1) of forming a lamp current to a waveform where a standard period current (as shown in fig.3) supplied at a predetermined standard period and a short period current (as shown in fig.2) of a period shorter than that described above are alternately replaced with each other on every 1

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period (as shown in fig.4), and

optionally setting a duty ratio (9, fig.1) before and after the polarity inversion for

the standard frequency current and/or the short frequency current, and

the lamp current forming device has a current controller (10) of setting the current

value before and/or after the inversion of the polarity of the short period current to

higher than the current value of the standard signal current (as shown in fig.7,

section 10 – section 20).

As to claim 3, a high pressure discharge lamp lighting device according to claim 2, Kikuchi Seiji further discloses wherein the lamp current forming device has a waveform setter of gradually increasing or gradually decreasing the current value before and/or after the polarity inversion of the short period current into a ramp wave (as shown in figs.6-9, section 10 – section 20).

As to claim 5, a high pressure discharge lamp lighting device according to claim 2, Kikuchi Seiji further discloses wherein the current value of the short period current is set by the current controller to 1.2 times or more and 5 times or less the current value of the standard period current (figs.6-9, section 10 – section 20).

As to claim 6, a high pressure discharge lamp lighting device according to claim 2, Kikuchi Seiji further discloses wherein the lamp current forming device has a period setter of setting the standard period for the standard period current

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to 1/500 sec or more and 1/60 sec or less and the period for the short period current to 1/30 times or more and 1/4 times or less the standard period (varying the period by varying the frequency, the range could be in this range, figs.6-9, section 10 – section 20).

As to claim 8, Kikuchi Seiji discloses a method of lighting up a high pressure discharge lamp of supplying an AC lamp current (1, fig.1) to light up a high pressure discharge lamp, characterized by forming the lamp current with a current waveform where a standard period current at a predetermined standard period (as shown in 3) and a short period current (as shown in fig.2) of a period shorter than that described above are alternately replaced with each other on every 1 period (as shown in fig.4), and supplying while controlling a duty ratio (9, fig.1) before and after the polarity inversion of the standard period current and/or the short period current to a duty ratio being set in accordance with the high pressure lighting light, and setting the current value before and/or after the inversion of the polarity of the short period current to be higher than the current value of the standard signal current (figs.6-9, section 10 – section 20).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jianzi Chen whose telephone number is

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5712705292. The examiner can normally be reached on Monday through Thursday 10:00- 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Douglas W. Owens can be reached on 5712721662. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Jianzi Chen/
Examiner, Art Unit 2821

/Douglas W Owens/
Supervisory Patent Examiner, Art Unit 2821
June 29, 2009